

ECAL2007

9th European Conference on Artificial Life

Program

Workshops and Tutorials - Monday

Time	Room 1 Luis de Freitas Branco	Room 2 Eugénio de Andrade	Room 8 Glicínia Quartín	Room 10 Amadeo de Souza-Cardoso	Room 11 Cottinelli Telmo	Room 12 Daciano da Costa	Room 13 Amália Rodrigues	Room 16 Vianna da Motta
09:00 - 10:30	Extending the Darwinian Framework: new levels of selection and inheritance	The Emergence of Social Behaviour: from cooperation to language	Daisyworld. Exploring the mechanisms of planetary homeostasis (DEMPH)	Social Learning in Embodied Agents	Liquid and Reaction Theory for Artificial Chemistry (LRTAC)	Dynamics of Learning Behavior and Neuromodulation	Dynamical Approaches to Development: beyond the metaphor	Music-AL
10:30 - 11:00	Coffee Break							
11:00 - 12:30	Alexandra Penn, Hywel Williams, Crisantha Fernando	Markus Waibel, Sara Mitri, Julien Hubert, Danesh Tarapor	James Dyke and Inman Harvey	Alberto Acerbi, Davide Marocco, Paul Vogt	Hideaki Susuki	Eldan Goldenberg, Eduardo Izquierdo-Torres, Chris Buckley, Seth Bullock, Andrew Philippides	Alfredo Pereira, Adam Sheya, Rachel Wood	Eduardo Reck Miranda, João Martins, Qijun Zhang
12:30 - 14:00	Lunch							
14:00 - 15:30			Complex Adaptive Economic Systems		Simulation of Collective Intelligence (SCI)	Emergent Control in Embodied-Situated Agents using Recurrent Neural Networks (ECESA)		
15:30 - 16:00	Coffee Break							
16:00 - 17:00			Seth Bullock, Dave Cliff, Dan Ladley		Martijn Schut	Jorge Simão		
17:00 - 17:45								
17:45 - 18:00	Break							
18:00 - 19:30	Opening Ceremony including Keynote Lecture by Dario Floreano (see main program for details)							
19:30 - 21:00	Room 4 Vitorino Nemésio and Terrace Welcome Cocktail Party							

	Extending the Darwinian Framework: new levels of selection and inheritance
	The Emergence of Social Behaviour: from cooperation to language
	Daisyworld. Exploring the mechanisms of planetary homeostasis (DEMPH)
	Complex Adaptive Economic Systems

	Social Learning in Embodied Agents
	Liquid and Reaction Theory for Artificial Chemistry (LRTAC)
	Simulation of Collective Intelligence (SCI)
	Dynamics of Learning Behavior and Neuromodulation

	Emergent Control in Embodied-Situated Agents using Recurrent Neural Networks (ECESA)
	Dynamical Approaches to Development: beyond the metaphor
	Music-AL
	Opening Ceremony (see main program for details) and Welcome Cocktail Party

Monday

09:00 - 17:45	Workshops and Tutorials (see separate program)
17:45 - 18:00	Break
18:00 - 18:30	Opening Ceremony
18:30 - 19:30	Opening Keynote Lecture by Dario Floreano Evolution of altruistic cooperation and communication in robot societies
19:30 - 21:00	Welcome Party

	Workshops and Tutorials (see separate Workshops and Tutorials Program)
	Keynote Lectures
	Special Events

Tuesday

07:45 - 08:45	Registration
08:45 - 09:45	Keynote Lecture by Randall D. Beer The Dynamics of Brain-Body-Environment Systems: A Status Report
09:45 - 10:05	Measuring Autonomy by Multivariate Autoregressive Modelling Anil Seth
10:05 - 10:25	An Analysis of Behavioral Attractor Dynamics Alberto Montebelli, Carlos Herrera, Tom Ziemke
10:25 - 10:45	Coffee Break
10:45 - 11:05	The Dynamics of Associative Learning in an Evolved Situated Agent Eduardo Izquierdo, Inman Harvey
11:05 - 11:25	New Models for Old Questions: Evolutionary Robotics and the 'A not B' error Rachel Wood, Ezequiel Di Paolo
11:25 - 11:45	Adapting to Your Body Peter Fine, Ezequiel Di Paolo, Eduardo Izquierdo
11:45 - 12:05	Improving Agent Localisation Through Stereotypical Motion Bart Baddeley, Andrew Philippides
12:05 - 12:45	Poster Pitch
12:45 - 14:15	Lunch
14:15 - 15:15	Keynote lecture by Rudolf Bannasch Morphological intelligence in bionic applications
15:15 - 15:35	Near-Optimal Mobile Robot Recharging With The Rate-Maximizing Forager Jens Wawerla, Richard Vaughan
15:35 - 15:55	Evolving Virtual Neuronal Morphologies: a case study in Genetic L-Systems Programming Benjamin Torben-Nielsen
15:55 - 16:55	Poster Session and Coffee Break
16:55 - 17:15	Evolution of Neural Networks for Active Control of Tethered Airfoils Allister Furey, Inman Harvey
17:15 - 17:35	Feathered Flyer: Integrating Morphological Computation and Sensory Reflexes into a Physically Simulated Flapping-Wing Robot for Robust Flight Manoeuvre YoonSik Shim, Phil Husbands
17:35 - 17:55	Synthesizing Physically-Realistic Environmental Models from Robot Exploration Josh Bongard
17:55 - 18:15	Guided Self-organisation for Autonomous Robot Development Georg Martius, J. Michael Herrmann, Ralf Der
18:15 - 19:30	Panel Discussion

	Keynote Lectures
	Talks
	Posters
	Panel Discussion

Wednesday

08:45 - 09:45	Keynote Lecture by António Coutinho Purposeless diversity and degeneracy of molecular "recognition" are the solution to the unknown: each individual immune system is a fractal of evolution
09:45 - 10:05	Simulation Model for Functionalized Vesicles: Lipid-Peptide Integration in Minimal Protocells Kepa Ruiz-Mirazo, Fabio Mavelli
10:05 - 10:25	Formulating Membrane Dynamics with the Reaction of Surface Objects Kazuto Tominaga, Tooru Watanabe, Maki Suzuki
10:25 - 10:45	Coffee Break
10:45 - 11:05	A Computational System for Investigating Chemotaxis-Based Cell Aggregation Manolya Eyyiyurekli, Peter Lelkes, David Breen
11:05 - 11:25	Multi-Level Selection in the Emergence of Language Systematicity Luc Steels, Remi van Trijp, Pieter Wellens
11:25 - 11:45	Multi-Level Selectional Stalemate in a Simple Artificial Chemistry Barry McMullin, Ciaran Kelly, Darragh O'Brien
11:45 - 12:05	Spatial Embedding and Complexity: The Small-World is Not Enough Christopher L. Buckley, Seth Bullock
12:05 - 12:45	Poster Pitch
12:45 - 14:15	Lunch
14:15 - 15:15	Keynote Lecture by Janet Wiles Complex Systems from DNA to development
15:15 - 15:35	Information-Cloning of Scale-free Networks Mahendra Piraveenan, Mikhail Prokopenko, Albert Zomaya
15:35 - 15:55	Networks regulating networks: The effects of constraints on topological evolution Francisco C. Santos, Hugues Bersini, Tom Lenaerts
15:55 - 16:55	Poster Session and Coffee Break
16:55 - 17:15	Developmental Neural Heterogeneity through Coarse-Coding Regulation Jekanthan Thangavelautham, Gabriele M.T. D'Eleuterio
17:15 - 17:35	Evolution of One-dimensional Cellular Automata by 1/f Noise Shigeru Ninagawa
17:35 - 18:50	Panel Discussion
18:50 - 19:00	Break
19:00 - 20:00	EU-FET Initiatives Workshop David N. Guedj

21:30	Alife Music Concert - Concert Hall, Instituto Franco-Português, Avenida Luis Bivar
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	Keynote Lectures
	Talks
	Posters
	Panel Discussion
	Special Events
	Workshops and Tutorials

Thursday

08:45 - 09:45	Keynote lecture by Peter Todd Minding the environment in simulations of cognition
09:45 - 10:05	A Multi-Level Selection Model for the Emergence of Social Norms Francisco C. Santos, Fabio A. C. Chalub, Jorge M. Pacheco
10:05 - 10:25	Evolutionary Dilemmas in a Social Network Leslie Luthi, Enea Pestalacci, Marco Tomassini
10:25 - 10:45	Coffee Break
10:45 - 11:05	The role of collective reproduction in evolution John Bryden
11:05 - 11:25	Efficient Multi-Foraging in Swarm Robotics Alexandre Campo, Marco Dorigo
11:25 - 11:45	Social Facilitation on the Development of Foraging Behaviors in a Population of Autonomous Robots Alberto Acerbi, Davide Marocco, Stefano Nolfi
11:45 - 12:05	Exogenous Fault Detection in a Collective Robotic Task Anders Lyhne Christensen, Rehan O'Grady, Mauro Birattari, Marco Dorigo
12:05 - 12:45	Poster Pitch
12:45 - 14:15	Lunch
14:15 - 15:15	Keynote Lecture by Ezequiel Di Paolo Escape from pervasive individualism: Why should embodied cognition seriously study the collective dynamics of social interaction?
15:15 - 15:35	From Solitary to Collective Behaviours: Decision Making and Cooperation Vito Trianni, Christos Ampatzis, Anders Lyhne Christensen, Elio Tuci, Marco Dorigo, Stefano Nolfi
15:35 - 15:55	Individual Selection for Cooperative Group Formation Simon Powers, Alexandra Penn, Richard Watson
15:55 - 16:55	Poster Session and Coffee Break
16:55 - 17:15	From the Outside-In: Embodied Attention in Toddlers Linda Smith, Chen Yu, Alfredo Pereira
17:15 - 17:35	Evolution of Acoustic Communication Between Two Cooperating Robots Elio Tuci, Christos Ampatzis
17:35 - 17:55	Group size effects on the emergence of compositional structures in language Paul Vogt
17:55 - 18:15	Community Detection in Complex Networks using Collaborative Evolutionary Algorithms Anca Gog, D. Dumitrescu, Béat Hirsbrunner
18:15 - 19:30	Panel Discussion

	Banquet
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	Keynote Lectures
	Talks
	Posters
	Panel Discussion
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Friday

08:45 - 09:45	Keynote Lecture by Ricard V. Solé Synthetic protocell biology: from reproduction to computation
09:45 - 10:05	Comparing ACO Algorithms for Solving the Bi-Criteria Military Pathfinding Problem Antonio Mora, Juan Julián Merelo, Cristian Millán, Juan Torrecillas, Juan Luís Jiménez Laredo, Pedro A. Castillo
10:05 - 10:25	Increasing complexity can increase stability in a self-regulating ecosystem James Dyke, Jamie McDonald-Gibson, Ezequiel Di-Paolo, Inman Harvey
10:25 - 10:45	Coffee Break
10:45 - 11:05	Niche Differentiation and Coexistence in a Multi-Resource Ecosystem with Competition Walter de Back, László Guylás, George Kampis
11:05 - 11:25	Entropy Production in Ecosystems Nathaniel Virgo, Inman Harvey
11:25 - 12:05	Poster Pitch
12:05 - 13:00	Poster Session
13:00 - 14:15	Lunch
14:15 - 14.45	Talk by Brian Goodwin Title TBA [this talk opens the special session on Artificial Life and Biology]
14.45 - 16.00	Special session on Artificial Life and Biology and closing remarks
	Social Event at Lisbon Castle

	Keynote Lectures
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